

MONTHLY REPORT

1 March 1959 - 31 March 1959

RESEARCH AND DEVELOPMENT BRANCH
ENGINEERING STAFF

RESEARCH AND DEVELOPMENT LABORATORY

PROJECTS AND ACTIVITIES

2001 - MECHANICAL LABORATORY PROJECTS

The following is a status report of Mechanical Laboratory assignments other than the support given to regularly assigned numbered projects:

- 2001-66 TINY TOT T.D. Shelves - 100 required by SEB
This project is continuing on a fill-in basis.
- 2001-70 Microswitch Modification - 256 required by SEB, completed
2 March 1959.
- 2001-73 Tape Snubber Assemblies - 24 required by SEB, completed
4 March 1959.
- 2001-74 Engraved Nameplates - 59 required by SEB, completed
5 March 1959.

2004-118 R-744/PRD RECEIVER

Project Engineer: [REDACTED]

Tests are in process.

2004-135 PROJECT TAILOR, RR-22

Project Engineer: [REDACTED]

The final report on this receiver has been published and distributed. A one-half watt transmitter, a modulator, and a DC to DC converter have been received for evaluation. The evaluation has been delayed because the TAILOR transmitter was used in the TRO demonstrations.

2004-141 KE-6 KEYS

Project Engineer: [REDACTED]

Ten keys were received and tested this month. Nine of the keys were found to be satisfactory and the contractor repaired the defective one. A memorandum report has been published and distributed. This project has been closed.

2004-146 CB-3 MINIATURE DATA RECORDER AND CB-4 PLAYBACK UNIT

Project Engineer: [REDACTED]

25X1A6a

Preliminary tests have been completed. Tests indicate the mechanical section of the CB-3 may meet its specifications with minor adjustments or modifications. The electronic section needs further work. The noise recorded on the tape needs to be reduced to a non-objectionable level.

The CB-4 appears to operate satisfactorily with the exception that the unit appears to overheat after 6 hours of operation.

2004-143 TRANSFORMERS, TYPE TR-103

Project Engineer: [REDACTED]

25X1A6a

The final report is in the process of being published.

2004-147 THERMOELECTRIC GENERATOR, BC-7

Project Engineer: [REDACTED]

25X1A6a

An improved model of the thermoelectric generator BC-7 has been received in the Laboratory. Evaluation of this unit is scheduled to begin the first of April.

25X9A2

2005-114 [REDACTED] RECORDER

Project Engineer: [REDACTED]

25X1A6a

This project has been temporarily suspended because of higher priority projects.

25X9A2

2005-115 [REDACTED] RECEIVER

Project Engineer: [REDACTED]

25X1A6a

Tests indicated that numerous internal responses occurred at the harmonic frequencies of the BFO frequency. The receiver is unstable at advanced control settings. The final report has been published and distributed. This project has been closed.

2007-1 RADIOLOGICAL SURVEY AND RADIATION DETECTION INSTRUMENTS

Project Engineer: [REDACTED]

25X1A6a

The operational tests conducted in March indicated that all units were in an operating condition. The quarterly report to Headquarters Medical Division was made.

~~SECRET~~

2007-41 TAPE RECORDER, TRIX, OSCILLATOR-KEYER MODIFICATION
Project Engineer: [REDACTED]

25X1A9a

The breadboard for this modification has been completed and tested. Circuit and package layouts have been made and will be processed as soon as the mechanical shop can schedule the work.

2007-46 DEAD LETTER DROP
Project Engineer: [REDACTED]

25X1A9a

The RS-19 Radio Set was repaired and put in operating condition.

2007-49 RT-3 MODIFICATION
Project Engineer: [REDACTED]

25X1A9



25X1A9

2044-6 URT-11
Project Engineer: [REDACTED]

25X1A9

Tests indicate that a DC relay and associated circuitry may be used to suppress the unwanted transients found in the power supply. We are awaiting receipt of a smaller relay than that used in the tests.

2064 REUSEABLE TAPE
Project Engineer: [REDACTED]

25X1A9a

Results of the tests indicate that the performance of the ink and tape is satisfactory. The report has been published and the project closed.

2069 AGENT RADIO TRANSMITTERS, RT/A-11A and RT/B-11A
Project Engineer: [REDACTED]

25X1A9a

Prototypes of the modified transmitters have been completed and

~~SECRET~~

evaluated. The evaluation report has been written and is now in the process of being published.

2099-105 CV-13, BASE STATION CONVERTER

Project Engineer: [REDACTED]

25X1A9a

Prior to delivery, the units were checked for proper operation and all units operated satisfactorily.

2108 AGENT AUTOMATIC STATION, AS-3

Project Engineer: [REDACTED]

25X1A9a

A memorandum report listing the deficiencies of this unit was published and distributed this month.

2110 SPECIAL COMPONENTS INVESTIGATION

Project Engineer: [REDACTED]

25X1A9a

No activity occurred on this project this month because of higher priority projects.

2126 RT-6 CONVERTER

Project Engineer: [REDACTED]

25X1A9a

Initial tests indicated a "hash" problem in the receiver power supply. Production units that were tested did not meet the output voltage requirements for the transmitters.

2147 CB-13, SPECIAL PURPOSE RECORDER

Project Engineer: [REDACTED]

25X1A9a

The report on this unit is in the process of being published.

2510 VARIABLE FREQUENCY AUDIO OSCILLATOR, IN-1

Project Engineer: [REDACTED]

25X1A9a

Quotes received for casting the IN-1 cases indicate that they can be cast for approximately the same dollar cost as machining. However, casting will free 300 man-hours of labor and machine time for application to other projects.

2512 CV-2A CONVERTERS

Project Engineer: [REDACTED]

25X1A9a

Twenty [REDACTED] capacitors, modified to remove the defects noted in

~~SECRET~~

~~SECRET~~

the prototype CV-2A, have been received. The capacitors are now being tested prior to beginning additional CV-2A fabrication.

2515 A-3 MODULATOR f/TA-1A TRANSMITTER ADAPTER
Project Engineer: [REDACTED]

25X1A9a

Tests on this unit have been completed. The power output on the low band averages 3.26 watts (fundamental) and on the high band averages 1.80 watts (doubling). The modulator is capable of modulating the carrier approximately 25%.

2523 APERIODIC RECEIVER SYSTEM, CS-24
Project Engineer: [REDACTED]

25X1A9a

Fifteen CR-4 Receivers have been delivered. Five flat packaged receivers are in the final stage of assembly. Fabrication of the OS-7 oscillator has been started. Completion of the prototype IN-11 Frequency Readout and CU-8 Signal Actuate Devices will be slowed somewhat because of higher priority work; however, work will continue on these units as time permits.

2526 PORTABLE ELECTRONIC KEYERS, PROTOTYPES KE/A-9P and KE/B-9P
Project Engineer: [REDACTED] 25X1A9a

The instruction manuals for the keyers will be distributed during the first week of April.

2528 PULSE WIDTH DETERMINATION STUDY
Project Engineer: [REDACTED] 25X1A9a

Pulses have been measured with adequate resolution ranging from 0.2 usec to 1.0 usec and from 6 usec to 10 usec. Additional cores have been ordered that should fill in the gap between 1 and 6 usec. Driving circuitry is being devised to handle two or possibly three cores to cover the range from 0.2 usec to 10 usec. A receiver-video/audio amplifier setup will be made for use in testing.

2529 OFF-LINE KEYER STUDY
Project Engineer: [REDACTED] 25X1A9a

A study has been undertaken to determine the feasibility of developing an electronic Off-Line Keyer.

~~SECRET~~

25X1A9a

2530 RECEIVER RR-33 (MODIFIED ZENITH MODEL 500)
Project Engineer: [REDACTED]

Forty Zenith Model 500 receivers are being modified and repackaged for operation in the 3 - 12 mc band.

The following projects were not worked during this period:

2003-2 Crystal-Video Receiving System Investigation
2007-14 Low Noise Transistor Measurements
2151 Evaluation of Conducting Glass Antenna
2514 TA-1A
2508 Etched Antenna
2629 IN-10 Calibrator
2639 CR-2 Evaluation
2045 TP-3 Printers
2527 Voice Operated Relay for the KY-1

25X1A6a

SUPPLY ACTIVITIES

Sixty-five requisitions, 909-489-59 through 909-553-59 were submitted during this reporting period. Breakdown as to number and estimated cost on requisitions to Headquarters and [REDACTED] is as follows:

25X1A6a

	No. Regns.	No. Line Items	Est. Cost.
Headquarters	10	38	\$5,881.71
[REDACTED]	55	105	3,075.26
Totals	65	143	\$8,956.97

The requisitions to Headquarters include a requisition for two Model CK-7 Tape Perforators at \$1,348.98 each, and a requisition for forty-one Zenith Model Royal 500 Transistorized Portable Receivers at \$38.096 each.

Financial Property Accounting was inaugurated at Account 909 on 2 March 1959. All non-expendable property was shown as in-use. Dollar opening value by materiel unit was as follows:

Materiel Unit 1	\$ 107.34
Materiel Unit 2	16,953.64
Materiel Unit 3	53,656.91
Materiel Unit 4	359.92
Materiel Unit 5	621,928.04
Materiel Unit 6	525.00
Materiel Unit 7	2,315.12
TOTAL	\$695,845.97

~~SECRET~~

SUPPLY ACTIVITIES Continued

A Wash Voucher series which serves the dual purpose of a debit and credit voucher was established to facilitate the handling of Code 00 Wash entries under the financial Property Accounting System.

Reconciled extended values on the net change basis for the period 1 March 1959 through 25 March 1959 were as follows:

Materiel Unit 5	+ \$1,101.00
Materiel Unit 7	- 215.86
Total Change	+ \$ 885.14

There were no changes in materiel units one, two, three, four, and six. Total dollar value of all materiel groups through 25 March 1959 is \$696,731.11.



Chief, Research & Development Laboratory

25X1A5a1

~~SECRET~~